



## Effects of Cellular Shades on Cold Infiltration and Gas Consumption

**HRES Sustainability Team  
April 29, 2009**

<b>Results &amp; Discussion</b>
---------------------------------

Effect on heat loss / cold infiltration – temperature data

The cellular shade was more effective than the bare window at creating a barrier between the cold outside air and the warm air inside the room.

<b>Ave Temperature Difference Between Outside and Inside Air (degrees Fahrenheit)</b>		
Glass	Glass + Cellular Shade	Glass + Mini Blind
33	37	26

The mini blind performed even worse than bare glass, allowing the inside air to come within 26 F of the outside air. One explanation is that this mini blind was in a different room that may not have received the same distribution of warm indoor air. Another explanation was provided by a Gordon’s Window Décor representative:

*“...we believe that what you are showing is ...something we've known for years. Mini-blinds act as a "reverse radiator" - they accelerate the loss of heat in the winter and also accelerate the heat gain in the summer, as compared to glass alone. This is due to how they direct the air currents and the fact that metal is a good conductor.”*

Gas consumption in the unit with the cellular shades was 20 therms lower per month than the average for all other units, regardless of indoor thermostat settings.

<b>Average Gas Use per Month per Unit (therms)</b>	
Cellular Shades	Mini Blinds
48	68